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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,871	01/13/2004	Natsuko Nobukuni	SAN	3415
26304	7590	04/22/2005	17.343A(100946-17343)	
KATTEN MUCHIN ZAVIS ROSENMAN 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER PSITOS, ARISTOTELIS M	
			ART UNIT	PAPER NUMBER
			2653	
DATE MAILED: 04/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

11/13/04

<b>Office Action Summary</b>	<b>Application No.</b> 10/756,871	<b>Applicant(s)</b> NOBUKUNI ET AL.	
	<b>Examiner</b> Aristotelis M Psitos	<b>Art Unit</b> 2653	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 13 January 2004.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 38-41 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 38-41 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All    b)  Some \*    c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. 09/573,319.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/13/04.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

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**DETAILED ACTION**

This is a divisional of Sn 09/573319.

Claims 38-41 are pending, all others claims having been canceled by the preliminary amendment of 1/13/04.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09573319, filed on May 18,2000. ***Information***

***Disclosure Statement***

The IDS of 1/13/04 has been reviewed and made of record. The references therein are drawn to the subject matter of the parent file.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 38-41 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The circuitry as disclosed in paragraph 323 is critical or essential to the practice of the invention, but not included in the claim(s), and hence the claims as presented are not enabled by the disclosure. The examiner interprets the ultimate circuit recited by claim 38 as not providing for the recited function with respect to the adjustment of the rpm. That is, this function is performed by the circuitry disclosed in the above noted paragraph 323 and not the synchronizing circuitry.

The dependent claims do not clarify the above, and fall with their respective parent claim.

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2. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The formula recited is not clearly defined, since the value delta A is not defined. Is this to be AR? Further clarification is respectfully required.

***Claim Objections***

Claim 38 is objected to because of the following informalities: With respect to the reference signal generator and the ability of varying the clock signal T in a reverse proportion with respect to the radius, the examiner is not clear as to what this is referring to, as well as what/where is such defined in either the remainder of the specification and drawings. Appropriate response is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

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examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eguchi et al either '377 or '458) further considered with Ohta et al. The following analysis is made.

Claim 38

Eguchi et al

An optical disc recording/retrieving apparatus comprising:

see abstract & col. 1 lines 13-20

a motor for rotating a disc, which has a spiral groove with wobble which carrier frequency is constant in space frequency and meandering according to a signal modulated with a constant carrier frequency FLo and address information and also has a recording layer, at a constant angular velocity with a center of the disc being an axis of rotation, the disc having address information identifying each recording data block , which is a unit of recording information located at a specified position in the spiral groove, and a synchronization pattern identifying a head position of the recording data block,

see fig. 8 & col. 5 line 50 to col.. 6 line 48, element 76  
the data format is inherently present

an optical pick-up for generating a focused laser beam radiating the disc for recording/retrieving;

element 73 plus (see below)

linear motor for moving said optical pick-up radially of the disc to a given address;

see secondary reference  
Ohta, sled element 39

a focus servo circuit for focusing the focused laser beam on the recording layer;

see secondary reference  
Ohta element 38

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groove tracking servo circuit for scanning the spiral groove by the focused laser beam,

see secondary reference

Ohta element 38

a detector and decoder circuit for detecting and decoding a carrier frequency  $f_{Ao}$  address information and block synchronization signal from the meandering groove geometry,

see figures 11-12 in Eguchi et al

or alternatively in Ohta

element 35

a data-sequence generation circuit for generating a recording data sequence, which is modulated in terms of mark length modulation, in synchronism with a data reference clock T which has a frequency  $f_{do}$  and a start position of the recording block;

elements 40 & 50 in Eguchi et al

a laser-power modulation circuit for modulating a recording laser power in accordance with the

see element 66 in Eguchi et al

recording data sequence,

a reference signal generator for generating a data reference clock T which varies in reverse proportion to a radius position when the focused laser beam is moved radially of the disc to a given address recording block; and

see clock source in either

reference

a data-sequence synchronization circuit for synchronizing a data sequence, which

division/pll is in pll

figure 4 of Ohta et al

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is to be written in the given recording block,  
with the start position of the recording block by  
comparing in phase between a reference signal  $f_{Ro}$ ,  
which is obtained by dividing the data reference clock  
at a particular radius by  $N$  ( $N$  is an integer),  
and the carrier frequency  $f_{Ao}$  which  
is detected at the given address from  
the meandering groove geometry,  
and also making a fine  
adjustment of r.p.m. (revolutions per minute) of the  
disc so as to satisfy a relation  $f_{4o} = N f_{Ao}$ .

Either Eguchi et al is drawn to an optical rec/reproducing system having cav recording capability – see the description with respect to figures 8-12. Although not specifically shown in the reference, the focusing/tracking/linear movement element/ are considered inherently present, else the system would not be able to record and or reproduce intelligent information. Under 103 considerations, the Ohta et al reference discloses such system elements – see elements 17,19,38,40,12,20 and 21 in figure 1 as well as the discussion with respect to figure 4 with respect to the wobble format signal.

It would have been obvious to modify the base system of Eguchi et al with the above teaching from Ohta et al, motivation is to provide the various subsystems necessary for the operation of the Eguchi et al system so as to operate and perform the rec/repro.

With respect to the ability of having the appropriate synchronization of the wobble signal/meandering groove geometry, such is considered present in the above combined references.

If applicant can convince the examiner that such is nor present, see the further discussion with respect to Yoshimaru as it pertains to varying the clock frequency in accordance to radial position so as to permit constant linear density recording/reproducing ,

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With respect to claim 41, Ohta et al also discloses the frequency value of 22.05 kHz. With respect to the rpm limitation, either such is inherently present, or alternatively such a range is known in this environment as discussed further by Yamagami et al, see col. 8 lines 61 plus. That is the examiner concludes that cav rpm is within the designated range recited.

4. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 38 above, and further in view of either Naito or Miura et al.

This claim attempts to define a relationship between the clock frequency of a particular address as being composed of a reference frequency and an additional value predicated upon the change in radius. Such a mathematical relationship is considered an alternative expression of such frequencies as taught by either Naito – see col 10 lines 31 plus, wherein the frequency/radial zone is a function of a reference frequency and the change in the zone width, or Miura et al- see col. 12 lines 5plus, wherein the relationship is express with respect to velocities/zone.

5. It would have been obvious to modify the base system as relied upon above with respect to claim 38 and further express the relationship of the frequency in question as a variant/variation of already existing expressions.

6. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 38 above, and further in view of Rabe.

Rabe discloses the ability of having motors within 1/1000 of the rated speed.

It would have been obvious to modify the base system as relied upon above with respect to claim 38 and modify such with the above motor teaching from Rabe, motivation is to provide for a stable operation.

#### Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamagami et al can be relied upon in place of the Eguchi et al references as the base reference, see figure 38 and its disclosure. Katoh and Gushima are cited as illustrative of pll, and dividing circuitry for synchronizing with respect to a wobble signal.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos  
Primary Examiner  
Art Unit 2653



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